BRUHAT BANGALORE MAHANAGARA PALIKE

YELAHANKA ZONE

BYATARAYANAPURA DIVISION

KODIGEHALLI SUB DIVISOIN

Name of the Work: **Improvements to Roads and Drains at Balaji Layout and Surroundings in Ward.No.08 Kodigehalli**

Estimated Cost : 30.00 Lakhs

Job Code : **P-3111, SFC GRANTS 2017-18**

Job No : **008-17-** 000034

BRUHAT BANGALORE MAHANAGARA PALIKE

Name of Work:Improvements to roads and drains at Balaji layout and Surroundings in ward no 08

Est Cost: =30 Lakhs

Sl. No	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
1	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neately dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)								
	8th main 2nd crossbalaji layout	Cum							
	ch 0-125		1	125.00	0.60	0.70	52.50		
	9th main to 13th main (9th cross)		2	160.00	0.60	0.50	96.00		
	Culvert		2	6.50	2.00	1.00	26.00		
							174.50	186.92	**32617.54**
	Basic rate	**82.00**							
	Loading and unloading with 10km lead= 68+2.2x1.28x10 = 100	**100.00**							
	Area Weightage 6%	**4.92**							
	Final Rate	**186.92**							
2	Removing & Refixing Stone slabs of drains and Pointing in C.M(1:3) (P.No.25, I.No.5.33 of PW, P&IWTD SR 2016-17)								
	9th main to 13th main (9th cross)		2	160.00	1.80	--	576.00		
	drain								
	consider 50%						288.00		
	cover								
	9th main to 13th main (9th cross)		1	25.00	1.20	--	30.00		
	missing and damaged20%						-63.6		
							254.40	80.56	**20494.46**
	Basic rate	**76.00**							
	Area Weightage 6%	**4.56**							
	Final Rate	**80.56**							
3	Providing granite Slabs of Selected quality roughly dressed and fixed in cement mortor (1:6) including fixing curing etc,. Complete. 7.5cms thick (P.No.25, I.No.5.31.1 of PW, P&IWTD SR 2016-17)								
		Sqm							
	missing and damaged20%						**63.60**		
	8th main 2nd crossbalaji layout								
	ch 0-125		1	125.00		1.35	168.75		
							232.35	665.68	**154670.75**
	Basic rate	**628.00**							
	Area Weightage 6%	**37.68**							
	Final Rate	**665.68**							
4	KSRB 4-1.2: Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.892 cum and fine aggregates @ 0.465 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.2 of PW,P&IWTD S.R 2016-17)								
	Bed Concrete	Cum							
	Culvert		2	6.50	2.00	0.15	3.90		
							3.90	5348.76	**20860.16**

Sl. No	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
5	KSRB 5.2-3: Providing and constructing granite size stone masonry in foundation cement mortor 1:6, stone hammered dressed in courses not less than 20cms high, bond stones at 2m. apart in each course including cost of materaials, labour, curing complete as per specifications. Specifcation No. KBS 5.1.13. (P.No.23, I.No.5.6 of PW, P&IWTD S.R 2016-17)								
	SSM Wall	Cum							
	Culvert		2	6.50	0.60	0.90	7.02		
							7.02	4438.22	**31156.30**
6	KSRB 15.1.1 Providing flush pointing to square rubble, course or uncoursed stone masonry with cement mortar 1:3, 20mm deep, after raking joints to depth of 20mm nicely lining, including cost of materials, labour, curing complete as per specifications. (P.No.113, I.No.15.1 of PW, P&IWTD S.R 2016-17)								
	SSM Wall	Sqm							
	Culvert		2.00	6.50	--	0.90	11.70		
							11.70	102.82	**1202.99**
7	KSRB 4-1.6: Providing and laying in position plain cement concrete of mix 1:2:4 with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.878 cum and fine aggregates @ 0.459 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation and plinth, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.6 of PW,P&IWTD S.R 2016-17)								
	Coping	Cum							
	Culvert		2	6.50	0.60	0.10	0.78		
							0.78	5767.46	**4498.62**
8	Providing and fixing **RCC Precast cover slab of 250mm thick** for drain in cement concrete M20 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate)								
	Cover Slab	Sqm							
	SSM Wall		2	6.50	1.80	--	23.40		
							23.40	5317.00	**124417.80**
9	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications. MORTH Specification No.301 (P.No.143, I.No.19.14 of PW,P&IWTD S.R 2016-17)								
	Road Portion	Cum							
	8th main 2nd crossbalaji layout								
	ch 0-125		1	125.00	6.50	0.23	186.88		
	Dee enclave		1	18.00	5.20	0.23	21.53		
			8	1.60	1.35	0.23	3.97		
	9th main to 13th main (9th cross)		5	1.35	0.90	0.23	1.40		
							213.77	154.76	**33083.76**
	Basic rate	**46.00**							
	Loading and unloading with 10km lead= 68+2.2x1.28x10 = 100	**100.00**							
	Area Weightage 6%	**8.76**							
	Final Rate	**154.76**							
10	KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub-base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158,								
	Road Portion	Cum							
	ch 0-125		1	125.00	6.50	0.23	186.88		
	Dee enclave		1	18.00	5.20	0.23	21.53		
			8	1.60	1.35	0.23	3.97		
	9th main to 13th main (9th cross)		5	1.35	0.90	0.23	1.40		
							213.77	1768.08	**377970.68**
	Basic rate	**1668.00**							

Sl. No	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
	Area Weightage 6%	**100.08**							
	Final Rate	**1768.08**							
11	KSRRB M 500-6, Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kglsqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.161, I.No.21.6 of PW,P&IWTD SR 2016-17)								
	Road Portion	sqm							
	8th main 2nd crossbalaji layout								
	ch 0-125		1	125.00	6.50	--	812.50		
	Dee enclave		1	18.00	5.20	--	93.60		
			8	1.60	1.35	--	17.28		
	9th main to 13th main (9th cross)		5	0.80	1.60	--	6.40		
							929.78	27.56	**25624.74**
	Basic rate	**26.00**							
	Area Weightage 6%	**1.56**							
	Final Rate	**27.56**							
12	KSRRB 500-2: Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatement including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH Spec, Chapter 5 (P.No.161, I.No.21.2 of PW,P&IWTD SR 2016-17)								
	Road Portion	Sqm							
	Dee enclave		1	30.00	8.00	--	240.00		
			1	60.00	6.00	--	360.00		
	shanthivana main road		1	244.00	7.60	--	1854.40		
	9th main to 13th main (9th cross)		1	160.00	7.00	--	1120.00		
							3574.40	3.18	**11366.59**
	Basic rate	**3.00**							
	Area Weightage 6%	**0.18**							
	Final Rate	**3.18**							
13	KSRRB M500-7 : Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (P.No.161 I.No.21.7 of PW,P&IWTD SR of 2016-17)								
	For Laying DBM/ Profile Correction	Sqm							
	ch 0-125		1	125.00	6.50	--	812.50		
	Dee enclave		1	18.00	5.20	--	93.60		
	0		1	110.00	1.30	--	143.00		
	9th main to 13th main (9th cross)		1	80.00	1.80	--	144.00		
	For Laying BC	Sqm							
	ch 0-125		1	125.00	6.50	--	812.50		
	Dee enclave		1	30.00	8.00	--	240.00		
			1	60.00	6.00	--	360.00		
	shanthivana main road		1	244.00	7.60	--	1854.40		
	9th main to 13th main (9th cross)		1	160.00	7.00	--	1120.00		
							5580.00	**11.66**	**65062.80**
	Basic rate	**11.00**							
	Area Weightage 6%	**0.66**							
	Final Rate	**11.66**							

Sl. No	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
14	KSRRB M500-16. Providing and laying dense bituminous macadam 50-75mm compacted thickness with 4.5% VG-30 Bitumen using 40/60 TPH capacity H.M.P, using crushed aggregates of grading II, premixed with VG 30 grade bituminous binder and transporting the hot mix to work site, laying with mechanical paver to the required grade level and alignment rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10, complete in all respects complete as per specification MORTH specification No. 507 (P.No.163 I.No. 21.17.6 of PW,P&IWTD S.R 2016-17)								
	For Laying DBM/ Profile Correction	Cum							
	ch 0-125		1	125.00	6.50	0.05	40.63		
	Dee enclave		1	18.00	5.20	0.05	4.68		
			1	110.00	1.30	0.05	7.15		
	9th main to 13th main (9th cross)		1.00	80.00	1.80	0.05	7.20		
							59.66	6284.74	374916.16
	Basic rate	**5929.00**							
	Area Weightage 6%	**355.74**							
	Final Rate	**6284.74**							
15	KSRRB M500-19. Providing and laying bituminous concrete 30-40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH								
	For Laying BC	Cum							
	ch 0-125		1	125.00	6.50	0.040	32.50		
	Dee enclave		1	18.00	5.20	0.040	3.74		
	Dee enclave		1	30.00	8.00	0.040	9.60		
	0.00		1	60.00	6.00	0.040	14.40		
	shanthivana main road		1	244.00	7.60	0.040	74.18		
	9th main to 13th main (9th cross)		1	160.00	7.00	0.040	44.80		
							179.22	7083.98	1269590.90
	Basic rate	**6683.00**							
	Area Weightage 6%	**400.98**							
	Final Rate	**7083.98**							
16	KSRRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803.(P.No.185, I.No.24.15 of PW,P&IWTD SR 2016-17)								
	Edge line		2	637.00	0.15	--	191.10		
							191.10	542.72	103713.79
	Basic rate	**512.00**							
	Area Weightage 6%	**30.72**							
	Final Rate	**542.72**							
							Total Construction Cost		**2651248.000**
17	Add cost of **Waste Plastic** @ 8% of Bitumen weight								
	Bitumen = 141 kg/cum		--	--	--	--	**2021.60**	27.00	**54583.00**
	Waste =179.22X 141 X 8 / 100 = 2021.6								
18				**Cost towards PMC / Third Party inspection LS**					**26513.00**
19							**Tender premium10%**		**265124.80**
								Sub Total	**2997468.80**
20							**Miscellaneous and rounding off**		**2531.20**
								Total	**3000000.00**

ADMINISTRATIVE APPROVAL
Accorded For Rs. Thirty lakhs only
Head of A/C P-311
Date 19/12/17
EE(BTP) 19/12

Certificate.

1 The workspot was inspected and work is found to be necessary.
2 The area comes within the Bruhat Bangalore Mahanagara Palike limits.
3 The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.
4 The provisions made in the estimate are necessary and essential.

Assistant Engineer
H-08

Assistant Executive Engineer

Executive Engineer

Technical Sanction
Accorded For 30.00 lakhs
Head of A/C P-311
CER NO : 484 Dt: 27-12-17

TA — CE (YNK)